

14. (Added) A winter wheat-derived chitinase cDNA according to claim 12, characterized in that said cDNA has a nucleotide sequence that encodes an amino acid sequence listed as SEQ. ID. No. 1 in Fig. 1.

15. (Added) A winter wheat-derived chitinase cDNA according to claim 12, characterized in that said cDNA comprise 972 nucleotides/323 amino acids and has 68% identity (on amino acid sequence level) with rye-derived chitinase cDNA.

16. (Added) A winter wheat-derived chitinase cDNA according to claim 15, characterized in that said cDNA has a nucleotide sequence that encodes an amino acid sequence listed as SEQ. ID. No. 2 in Fig. 2.

17. (Added) A winter wheat-derived chitinase cDNA according to claim 12, characterized in that said cDNA comprises 960 nucleotides/319 amino acids and has 95% identity (on amino acid sequence level) with spring wheat-derived chitinase cDNA.

18. (Added) A winter wheat-derived chitinase cDNA according to claim 17, characterized in that said cDNA has a nucleotide sequence corresponding to an amino acid sequence listed as SEQ. ID. No. 3 in Fig. 3.

19. (Added) A method of isolating a winter wheat-derived chitinase cDNA having a nucleotide sequence which encodes an amino acid sequence listed as SEQ. ID. No. 1 in Fig. 1, a winter wheat-derived chitinase cDNA having a nucleotide sequence corresponding to an amino acid sequence listed as SEQ. ID. No. 2 in Fig. 2, a winter

wheat-derived chitinase cDNA having a nucleotide sequence corresponding to an amino acid sequence listed as SEQ. ID. No. 3 in Fig. 3, said method comprising the steps of:

extracting mRNA from winter wheat variety that has undergone a sufficient hardening process:

preparing cDNA and a cDNA library based on said mRNA;

analyzing nucleotide sequences of a number of plant-derived chitinase cDNAs which have all been published by EMBL/Genebank/DDBJ DNA Databank;

designing a pair of chitinase cDNA-specific degenerated primers with reference to highly conserved nucleotide sequence portions of the plant-derived chitinase cDNAs;

conducting PCR (polymerase chain reaction) using a pair of chitinase cDNA-specific degenerated primers and using said cDNA as a template, thereby amplifying fragments of chitinase cDNAs and obtaining amplified DNA fragments; and

using said amplified DNA fragments as probes for screening said cDNA library by a hybridization assay, to isolate recombinant plaques containing full length cDNA.

20. (Added) The method according to claim 19, wherein one of said a pair of chitinase cDNA-specific degenerated primers has the following nucleotide sequence:

(Forward): 5' C-A-C-G-A-G-A-C-C-A-C-N-G-G-C-G-G-N-T-G-G-G-C

(SEQ. ID. No. 4),

and the other has the following nucleotide sequence:

(Reverse): 5' A-C-N-A-A-T-A-T-C-A-T-C-A-A-C-G-G-C-G-G

(SEQ. ID. No. 5).